# A Functionalist Approach to Science

# The 100 Major Unicist Discoveries



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The name "unicist" means describing and defining the unified field of things.

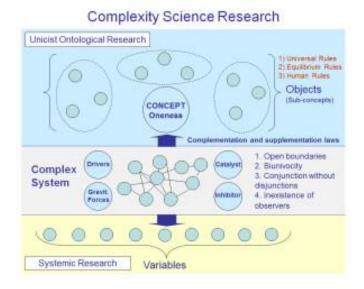
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#### The Unicist Research

The objective of the research works led by <u>Peter Belohlavek</u> at The Unicist Research Institute has been the development of solutions to influence adaptive environments to foster their evolution.

This research drove to a functionalist approach to science, which is in fact a pragmatic, structural and functionalist approach. It is based on managing the functionalist principles of things and their synchronized binary actions that make things work.



This approach allowed discovering the double dialectical behavior of nature and developing the unicist logic that allows understanding and managing the functionality of things.

This research requires managing the unicist ontological approach that defines things based on the unicist logic that defines their functionality and allows defining their dynamics and forecasting their evolution.

The unicist evolutionary approach was created to manage adaptive systems and environments. It is based on the use of a triadic structure of the functionalist principles that is homologous with the structure that regulates the evolution of nature and the cosmos.

The core application of the functionalist approach to sciences was the development of maximal strategies to grow and minimum strategies to ensure survival using binary actions to manage functions in adaptive environments to ensure results.

This research is based on the use of Unicist Epistemology that is based on the development of logical foundations of the functionalist principles and empirical justifications of the binary action to validate knowledge.

This epistemology is a pragmatic, structural, and functionalist approach that allows the building of reliable knowledge that replaced the processes of the falsification of knowledge by destructive testing processes.

This research led to the development of functional knowledge that builds a bridge between metaphysics and operational knowledge providing the functionalist principles and the corresponding binary actions that make them work.

#### Part 1:

# Introduction to the Functionalist Principle

#### Managing the Functionality of Things

This approach is based on the functionalist principle that defines the how and why of the functionality of things to install the binary actions that make things work. The functionalist principle gave birth to functional knowledge to manage the real world by integrating the know-how and the know-why of things. The functionalist principles define the fundamentals of the concepts of things.

The unicist ontology defines the unified field of things based on their functionalist principles. Their research requires using ontological reverse engineering and their use is based on conceptual engineering. The unicist functionalist principle uses the unicist logic to define the unified field of things and was developed at The Unicist Research Institute.

Predecessors of the unicist logic, the unicist ontology, the functionalist principle, and the binary actions to make things work can be found in the metaphysics of Aristotle and the TAO of Lao Tzu.

#### Core Differences with First Principles

| Aspect        | First<br>Principles   | Functionalist<br>Principles |
|---------------|-----------------------|-----------------------------|
| Purpose       | Develop Solutions     | Develop Solutions           |
| Structure     | Undefined             | Triadic (*)                 |
| Initial       | Reverse Engineering   | Ontological Reverse         |
| Approach      |                       | Engineering                 |
| The structure | Based on Cause-effect | Based on Binary Cause-      |
| of solutions  | Actions               | effect Actions              |
| Solution      | Abductive Reasoning   | Conceptual Engineering      |
| Building      |                       | & Abductive Reasoning       |
| Analytical    | Root Cause            | Unicist Logic Driven        |
| Method        | Management            |                             |
| Testing       | Pilot Testing         | Pilot Testing &             |
|               |                       | Destructive Testing         |

(\*) Defined by a Purpose, an Active Function, and an Energy Conservation Function.

### The Functionalist Principle works driven by Binary Actions

The functionalist principle defines the integration of the purpose with the active function based on the supplementation law which implies that the active function is redundant with the purpose but aims at a superior level of evolution. This produced a binary action that expands possibilities.

On the other hand, the purpose is integrated with the energy conservation function based on complementation law, where the second binary actions complement the purpose to ensure the achievement of its objectives. Example:

#### The Functionalist Principle of Airplanes

The purpose of flying an airplane can be considered to move from one airport to another.

The active function is given by the propulsion and the energy conservation function is given by the lift provided by the wings.



The binary actions to make

an airplane fly begin by producing the propulsion that generates the necessary speed of the airflow on the wings of the airplane to generate the lift.

#### **Examples of Evident Universal Binary Actions**

- Learning + Teaching = Knowledge acquisition
- Productivity + Quality = Production
- Marketing + Selling = Generation of revenue
- Root Causes + Triggering Causes = Solutions
- Efficacy + Efficiency = Effectiveness
- Empathy + Sympathy = Influence building
- Participation + Power = Leadership
- Processes + Objects = Organization
- Desirability + Harmony = Aesthetics

We suggest that you recognize the functionality of the binary actions you already use.

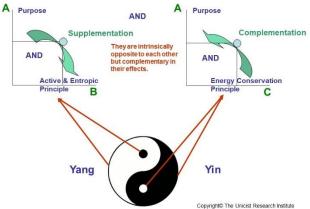
### The Functionalist Principle: A Bridge between the East & the West

Both the Unicist Logic, which is a double dialectical logic, and the TAO deal with the functionalist principles that define the functionality of things.

As it was said, the functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function. Their interaction defines the functionality of the binary actions that produce results.

The integration of the binary actions defined by Yin and Yang make the triadic structure of the unicist logic work. Both the TAO and the Unicist Logic explain the structure of the unified field of the functionality of a specific reality including its dynamics and evolution

Homology of the Unicist Logic and the TAO



Tao gives birth to One,
One gives birth to Two,
The Two gives birth to Three,
The Three gives birth to all things.

#### Chapter 42 of the Tao Te Ching

Both the TAO and the Unicist Logic are based on the use of the conjunction "and" excluding the use of the exclusive disjunction "or".

Yang is one of the binary actions that is homologous to the dialectics between the purpose and the active principle. It defines the active functionality of an entity.

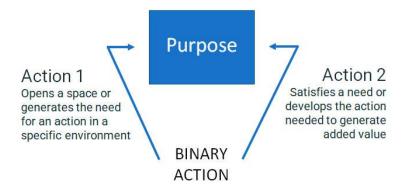
Yin is one of the binary actions that is homologous to the dialectics between the purpose and the energy conservation principle. It defines the energy conservation functionality.

The conjunction of both actions is defined by the triadic structure that integrates the ultimate functional purpose of an entity with the active principle and with its complement, defined by the energy conservation principle.

### Difference between Binary Actions and Manipulations

Binary actions are intuitively used by those who need to achieve results.

Binary Actions in business are two synchronized actions that aim at the same propose to achieve results



The functionalist approach is driven by value-adding binary actions while manipulation is driven by the need to control the environment to obtain benefits.

While the manipulative binary actions aim at controlling the environment, the unicist binary actions aim at generating added value. This is the difference between binary actions and manipulations.

#### Manipulations use Binary Actions

Manipulations are non-conscious actions to control the environment and obtain benefits at the expense of others. Manipulations are also based on two synchronized actions. The first action enhances the insecurities of the counterpart, while the second action aims to obtain the profit the manipulator was seeking. Examples:

- Implicit threats
- Playing on a person's insecurities
- Lying and denial
- Withholding information
- Changing the subject

It has to be considered that manipulations are extremely effective in the social field and might become installed in the fallacious myths of a culture, diminishing the capacity for generating value in an environment.

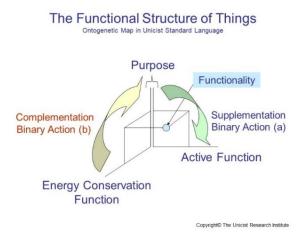
Generating value and profiting from the counterpart is the pathway of unicist binary actions. Binary actions are not such, but manipulations, when they are used just to profit from the environment.

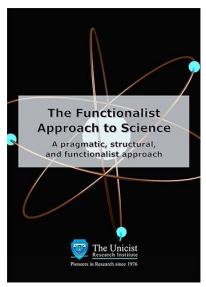
#### The Basics of the Functionalist Principle

The functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function.

These elements are integrated by the complementation and supplementation laws established by the unicist logic.

This structure works through unicist binary actions (UBA) that produce the functionality of any entity or process, whatever its kind.





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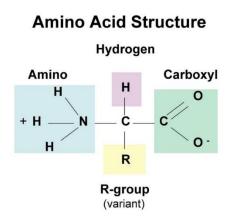
This approach was originated on the discovery of the triadic structure of the intelligence that underlies nature that defines the principles of its functionality and led to the development of the unicist logic that manages the functionality of "things". The unicist logic describes the functionality, dynamics, and evolution of things and allows managing them.

#### From Physics to Genomics

The triadic structure of the atom, defined by the proton, the electron, and the neutron, is an example of functionality in physics.

The unicist mechanics and quantum mechanics are essentially homologous, which allows understanding their

functionality. This knowledge allows influencing the unified field of entities and actions in the real world.



The functionality of chemical elements, which can be part of a molecule, is focused on the purpose of achieving a level of stable energy, the active functions are the valences, and the energy conservation functions are the bonds they build.

In genomics, you will find its triadic functionality in all its functions. E.g., nucleotides, inte-

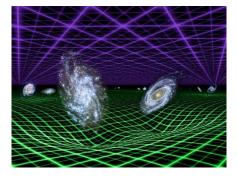
grated by sugar, nitrogenous base, and phosphate; amino acids integrated by hydrogen and amine and carboxylic acid groups; codons that are a specific sequence of three consecutive nucleotides that is part of the genetic code. The triadic structure of the unicist ontology of DNA and RNA viruses explains their functional structure.

Epigenetic functions work as inhibitors or catalysts that affect the behavior of genes.

#### From Microcosmos to Macrocosmos

The unified field of the macro and the microcosmos is beyond the operational solutions developed in physics and needs to be found at the functional level of the "system".

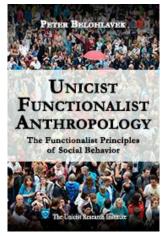
The microcosmos is the active function and the macrocosmos is the energy conservation function while the purpose is blurred or subject to speculation or religious beliefs.



The macro and the microcosmos are evident in social and economic systems, where family and society or microeconomics and macroeconomics

are, respectively, the active functions and the energy conservation functions of the systems that have evident purposes.

#### Functionalist Principles of Social Evolution



Unicist functionalist anthropology is the scientific approach to human social behavior and the structural analysis of individuals' deeds to forecast their evolution.

Unicist anthropology conceptually structures taboos, myths and utopias that influence social actions.

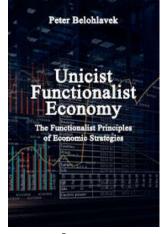
Its main objective is to forecast the behavior of individuals, institutions, and cultures to influence their evolution.

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#### Functionalist Principles of Economic Strategies

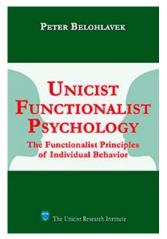
The unicist functionalist economy was developed to build economic strategies to sustain the development of countries.

It deals with the functionalist principles of economic behavior allowing the development of short-term plans and transgenerational strategies (20-50 years) to promote the development of countries. The functionalist principles of economy were found in the past of countries and became acceptable after the model of adapted economy was established in the United States and China.



Access

#### Functionalist Principles of Personal Evolution



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Functionalist psychology is defined as the mental process that manages intrapersonal and interpersonal relationships. The functionalist principles that drive human behavior allow inferring the natural actions of individuals to adapt to the environment.

It provides the functionalist principles that define the power of people, which allow them to better adapt to the environment and to increase their potential energy, generated by their resilience, to enhance their influence in the environment.

#### Annex 1:

#### The Functionalist Principles in Everyday Life

#### Examples of the Functionality of Things

#### The Functionalist Principle of Bicycling

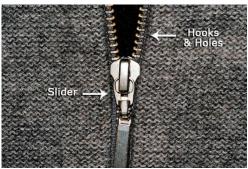
The purpose of riding a bicycle is to travel from one place to another.

The active function of the riding of bicycles is given by the actions on the pedals while the body of the rider is the energy conservation function that sustains the balance to ensure their functionality.

The binary actions of riding a bicycle begin by producing the propulsion to be able to balance on it.



#### The Functionalist Principle of a Zipper



The purpose of the zipper in the textile industry is to join two parts or pieces of a garment.

The active function of the zipper is provided by the slider which, when moved, engages the hooks of one section with the holes of the other.

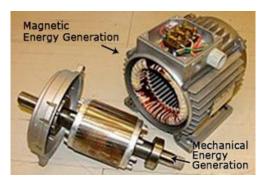
The energy conservation function is given by the hooks and holes located in the two pieces that are joined when pushed by the slider.

The binary actions that define the use of a zipper begin by the functionality of the slider and continue with the functionality of the hooks and the holes.

#### The Functionalist Principle of an Electric Motor

The purpose of an electric motor is to convert electrical energy into mechanical energy. DC motors and AC motors are based on the same essential principles that define their triadic structure.

Their active function is based on transforming electrical energy



into magnetic energy. The energy conservation function transforms the magnetic energy into mechanical energy.

The binary actions of the process are, on the one hand, the transformation of electrical energy into magnetic energy and, on the other hand, the transformation of the magnetic force into mechanical energy. These processes happen within the rotor and the stator of an electric motor.

#### The Functionalist Principle of Leadership



The purpose of leadership is ensuring the authority of a leader by driving people towards the achievement of something. It applies to all kinds of leaderships, whether they are in familiar, social, or business environments.

The active function is given by

the participation of the members of a group who aim at achieving their goals while they challenge the authority.

The energy conservation function is based on the non-exerted power the authority has, to sustain the functionality of the participation and the achievement of goals. The binary actions are, on the one hand, the participative activities between the leader and the members and, on the other hand, the existence of the necessary power to influence people without needing to exert it.

#### The Functionalist Principle of Relationship Building

The purpose of relationship building is to establish a complementation between two or more people. This applies to all types of relationships, whether they are familiar, personal, business, or social relationships.

The active function of relationship building is the demonstration of the existence of a functional value, which means that the participation of the person who is building a relationship is necessary.

The energy conservation function is the existence of a personal common space that can be shared.



The binary actions of the process are, on the one hand, the demonstration of the value that is being added and, on the other hand, the finding of a personal common goal that integrates the participants.

#### The Functionalist Principle of Educational Activities

The purpose of educational activities is to help people to acquire knowledge. The knowledge that is possible to be acquired depends on the structure of the intelligence of the participants.



The active function is based on the development of activities that establish a learning framework.

The energy conservation function is based on teaching activities that simplify the acquisition of knowledge and ensure that it can be stored in the long-term memory.

The binary actions consist in exposing the participants to experiences that make the knowledge necessary and, on the other hand, on developing teaching activities that help the learning process.

# Part 2: The 100 Major Unicist Discoveries

#### Discovery of Universal Functionalist Principles

#### 1) Unicist Ontogenetic Intelligence of Nature

It defines the intelligence that underlies nature and regulates its evolution. It allowed discovering and modeling the ontogenetic structures of the elements that integrate nature.

#### 2) Complexity Science Research

It defines the research process to deal with adaptive aspects of reality. It allowed researching and defining the ontogenetic structure of adaptive systems.

#### 3) Unicist Double Dialectical Logic

It defines the logic that allows emulating nature. It allowed establishing the functional rules of adaptive systems based on possibilities (beyond probabilities).

#### 4) The Unicist Ontology of Evolution

It defines the pathway of evolution and involution and the laws that regulate this process. It allowed dealing with the future of the adaptive aspects of reality.

#### 5) The Ontogenetic Structure of Adaptive Systems

It defines the nature of adaptive systems. This discovery established the structure that needs to be built when they are human made systems.

#### 6) Mathematics of the Unicist Logic

It defines the mathematics of the world of possibilities. It allowed defining a mathematics to define the possibilities of influential actions.

#### 7) The Structure of the Unicist Ontology

It defines the nature of a specific reality. It allowed defining and describing complex adaptive systems to make them manageable.

#### 8) The Ontogenetic Structure of Anthropological Invariables

It defines the nature of human societies. It allowed defining the structure of human complex adaptive systems.

#### 9) The Ontogenetic Structure of Credibility

It defines the nature of human credibility. It allowed defining objects that empower credibility to influence the environment

#### 10) The Ontogenetic Structure of Concepts

It defines the nature of facts, actions, or ideas. It allowed defining the extrinsic concepts that are deposited to an entity by humans based on the double dialectical logic.

#### 11) The Ontogenetic Structure of Pre-concepts

It defines the nature of human intuitive actions. It allowed defining the starting point of learning processes and the limits of human actions.

#### 12) The Ontogenetic Structure of Anti-concepts

They are homologous to antimatter. Their discovery allowed developing the necessary protective actions to avoid them and avoid the destruction of the concepts they deal with.

#### 13) The Ontogenetic Structure of Complementation

It defines the nature of complementation and of how individuals are able to use an intrapersonal complementation process and establish complements with the environment.

#### 14) The Ontogenetic Structure of Supplementation

It defines the nature of supplementation and of how individuals can supplement their weaknesses and compete with the environment.

#### 15) The Ontogenetic Structure of Conflicts

It defines the nature of conflicts. It allowed defining how to deal with evolution conflicts, involution conflicts, authority conflicts and the absence of conflicts.

#### 16) The Ontogenetic Structure of Social Critical Mass

It defines the nature of the generation of value. It allowed designing the necessary aesthetics, influence, and credibility to establish critical masses in adaptive systems.

#### 17) The Ontogenetic Structure of Objects

Understanding nature's organization by objects allowed discovering their nature and emulating it by building objects to install in human adaptive systems.

#### Functionalist Principles in Life Sciences

#### 18) The Ontogenetic Structure of Amino-acids

It defines the nature of the functionality of amino acids which follows the structure of the ontogenetic intelligence of nature.

#### 19) The Ontogenetic Structure of Health

If defines the nature of human health integrating the biological with psychological and energetic aspects.

#### 20) The Ontogenetic Structure of Universal Diagnoses

It defines the nature of diagnoses. It allowed defining the necessary destructive and non-destructive tests to validate diagnoses.

#### 21) The Ontogenetic Structure of Universal Therapeutics

It defines the nature of therapeutics. It allowed defining the structural approach to therapeutics and the possible consequences.

#### 22) The Fallacy of Organs and Chronic Diseases

It defines the nature of the fallacies of organs. It allowed defining the structural drivers to chronic diseases.

#### 23) The Ontogenetic Structure of Viruses

It defines the nature of viruses. It allowed defining viruses as non-living beings and their unicist ontological structure to avoid their dysfunctional consequences.

#### 24) The Ontogenetic Structure of Healing Processes

It defines the nature of health management. It allowed developing the segmentation of diseases, healing roles, therapeutics, remedies, and prevention.

#### 25) The Ontogenetic Structure of Universal Cures

It defines the nature of cures. It allowed diagnosing the possible consequences of therapeutics based on how it deals with cures.

#### 26) The Ontogenetic Structure of Universal Palliatives

It defines the nature of palliatives. It allowed defining the consequences of the use of palliatives in the development of chronic diseases.

#### Functionalist Principles of Institutions and Businesses

#### 27) The Ontogenetic Structure of Natural Organization

It defines the nature of organizations. It allowed defining the natural organizational processes and the business architecture in global and local environments.

#### 28) The Ontogenetic Structure of Institutions

It defines the nature of institutions. It allowed defining institutions and institutionalization processes to support evolution and growth.

#### 29) The Ontogenetic Map of Institutional Archetypes

It defines the essential structure that drives institutions. It allowed defining what is possible and what is not when developing business strategies.

#### 30) The Ontogenetic Structure of Enterprises

It defines the nature of transcendent enterprises. It allowed defining diagnoses, strategies, architectures, and business processes to sustain personal and transcendent goals.

#### 31) The Ontogenetic Structure of Entrepreneurs

It defines the nature of entrepreneurial processes. It allowed developing entrepreneurial strategies and using personal instead of institutional archetypes.

#### 32) The Principles of Organizational Equilibrium

They define the rules that need to be considered when building organizations. This discovery allowed developing stable growth plans in institutions.

#### 33) The Ontogenetic Structure of Businesses as Adaptive Systems

It defines the nature of adaptive businesses. It allowed developing business architectures transforming their complexity into systemic, simple business processes.

#### 34) The Ontogenetic Structure of Universal Strategy

It defines the nature of universal strategies. It allowed developing adapted strategies including maximal and minimum strategies to achieve predefined goals.

#### 35) The Ontogenetic Structure of Family Businesses

It defines the nature of family businesses. It allowed designing different approaches based on business-driven or family-driven organizations.

#### 36) The Ontogenetic Structure of Continuous Improvement

It defines the nature of continuous improvement. It allowed developing approaches that include updates, upgrades, and innovation in the business processes.

#### 37) The Ontogenetic Structure of Change Management

It defines the nature of changes. It allowed the development of different change strategies according to the type of change: small, medium, and big.

#### 38) The Ontogenetic Structure of Quality Assurance

It defines the nature of quality assurance. It allowed installing quality assurance in business processes and in business objects to introduce automation.

#### 39) The Ontogenetic Structure of Object-Driven Organization

It defines the nature of an object-driven organization. It allowed the introduction of driving, entropy inhibiting, catalyzing, inhibiting, and gravitational objects to empower results.

#### 40) The Ontogenetic Structure of Business Objects Design

It defines the nature of object design. It allowed designing operational, functional, systemic, and cognitive objects to sustain business processes.

#### 41) The Ontogenetic Structure of Object Driven Management

It defines the nature of management. It allowed optimizing the integration of peopleware, software, and hardware in the business processes.

#### 42) The Ontogenetic Structure of Marketing Mix

It defines the nature of the marketing process. It allowed the development of a logical approach to marketing and developing object-driven marketing processes.

#### 43) The Ontogenetic Structure of Functional Segmentation

It defines the nature of the observable level of segmentation. It allowed including "aesthetics" into the marketing process to influence buyers.

#### 44) The Ontogenetic Structure of Psychological Segmentation

It defines the nature of the relationship segmentation. It allowed including intrapersonal and interpersonal aspects into marketing processes to influence buyers.

#### 45) The Ontogenetic Structure of Conceptual Segmentation

It defines the nature of the segmentation of attitudes. It allowed including the attitudes of buyers in the marketing processes.

#### 46) The Ontogenetic Structure of Lifestyle Segmentation

It defines the nature of lifestyles. It allowed considering lifestyles as a possibility and as a limit for marketing processes.

#### 47) The Ontogenetic Structure of IT Architecture

It defines the nature of information technology. It allowed integrating peopleware with software and hardware to optimize results and introduce adaptive systems.

#### 48) The Ontogenetic Structure of Robotics

It defines the nature of robotics. It allowed developing flexible robots to manage adaptive systems using business objects to drive and catalyze these processes.

#### 49) The Ontogenetic Structure of Peopleware

It defines the nature of human work processes. It allowed developing business processes managing efficacy, efficiency, and an adequate automation level to produce results.

#### 50) The Ontogenetic Structure of Business Growth

It defines the nature of microeconomic growth. It allowed defining the fundamentals that need to be managed to generate growth in businesses.

#### 51) The Ontogenetic Structure of Business Synergy

It defines the nature of universal synergy. Its application in organizations allowed developing work synergy, product synergy and business synergy.

#### 52) The Ontogenetic Structure of Market Confrontations

It defines the nature of confrontations/wars. It allowed defining structural strategies according to the needs of the business, the products, the markets, and the competitors.

#### 53) The Ontogenetic Structure of Business Architecture

It defines the nature of architecture. It allowed defining the structure of processes that allow providing the necessary utility, aesthetics, and solidity to the projects.

### 54) The Ontogenetic Structure of Client-Centered Management

It defines the nature of client orientation. It allowed defining a metamodel to be used to develop composite business objects to generate market orientation.

### 55) The Ontogenetic Structure of Organizational Immune Systems

It defines the nature of the immune system. It allowed defining the institutional procedures to ensure their capacity to manage adaptive environments.

### 56) The Ontogenetic Structure of Ontological Reverse Engineering

It defines the nature of reverse engineering. It allowed the development of a methodology to consider facts as an input to find the concepts and fundamentals that underlie them.

#### 57) The Ontogenetic Structure of a Unified Field in Businesses

It defines the nature of a Unified Field. It allowed managing adaptive systems in their oneness to produce the results that are needed.

#### 58) The Ontogenetic Structure of Pilot Testing

It defines the nature of testing. It includes both destructive and non-destructive tests ending with pilot activities that allow confirming the validity of solutions.

#### 59) The Ontogenetic Structure of Leadership

It defines the nature of leaders. It allowed developing an object driven leadership approach that saves energy and maximizes results.

#### Functionalist Principles to deal with Cultures, Countries & Globalization

#### 60) Unicist Conceptual Economy

It defines the nature of economic processes. It allowed defining which macro and micro economic approach is functional considering the archetypes that are involved.

#### 61) Unicist Conceptual Anthropology

It defines the nature and evolution of human organizations. It allowed defining the structural solution for human adaptive systems.

#### 62) The Ontogenetic Structure of Country Archetypes

It defines the nature of cultural archetypes. It allowed understanding the possibilities and limits of countries based on the cultural archetype they have.

#### 63) The Ontogenetic Structure of Countries' Evolution

It defines the nature of social evolution. It allowed forecasting the future of countries based on the use of unicist logical inferences.

#### 64) The Ontogenetic Structure of the Collective Unconscious

It defines the nature of the collective unconscious. It allowed defining the essential drivers of social behavior and its possibilities and limits.

#### 65) The Ontogenetic Structure of Collective Intelligence

It defines the collective intelligence and synergy of a culture. It allowed defining the different approaches that need to be managed to adapt to different cultures.

#### 66) The Ontogenetic Structure of Economic Behavior

It defines the nature of the economy. It allowed defining the economic possibilities and their evolution or involution.

#### 67) The Ontogenetic Structure of Economic Ideologies

It defines the nature of economic ideas. It allowed defining the consistency of economic models with the cultural and social scenario.

#### 68) The Ontogenetic Structure of Wealth and Poverty

It defines the nature of wealth. It allowed defining the fundamentals that drive countries towards a superior level of productivity and well-being.

#### 69) The Ontogenetic Structure of Political Scenarios

It defines the nature of political structures. It allowed defining the fundamentals that drive political actions in different types of States and governments.

#### 70) The Ontogenetic Structure of Democracy

It defines the nature of democracy. It allowed forecasting the evolution of country scenarios based on the natural alternations of democratic power.

#### 71) The Ontogenetic Structure of Political Ideologies

It defines the nature of ideologies. It allowed forecasting the evolution of countries driven by absolute and non-absolute ideologies.

#### 72) The Ontogenetic Structure of Social Scenarios

It defines the nature of social evolution. It allowed forecasting social evolution, involution and stagnation depending on the archetypes of a culture.

#### 73) The Ontogenetic Structure of Lifestyles

It defines the nature of lifestyles. It allowed adapting to the lifestyles of cultures based on the knowledge of the archetypes and consequent habits of a country.

#### 74) The Ontogenetic Structure of Ideological Change

It defines the nature of ideological changes. It allowed developing strategies to influence the evolution of ideologies in micro and macro environments.

#### 75) The Ontogenetic Structure of Educational Culture

It defines the nature of education. It allowed defining the functionality of educational systems and its consistency with the archetypes of cultures.

#### 76) The Ontogenetic Structure of Sustainable Globalization

It defines the nature of globalization. It allowed forecasting the influence of cultures in the international environment and its consequences.

#### 77) The Ontogenetic Structure of Diplomacy

It defines the nature of diplomacy. It allowed forecasting the conflict management of cultures and the triggering of extreme conflicts.

#### 78) The Ontogenetic Structure of Negotiations

It defines the nature of negotiations. It allowed developing an object driven negotiation model to minimize energy and maximize results.

### The Functionalist Principles of Psychology and Learning

#### 79) Unicist Conceptual Psychology

It defines the essential drivers of human behavior. It allowed defining the way individuals establish intrapersonal and interpersonal relationships to adapt to the environment.

#### 80) The Ontogenetic Structure of the Logical Type of Thought

It defines the nature of the logical approach of individuals. It allowed diagnosing the functionality of the type of thought and fostering its evolution.

#### 81) The Ontogenetic Structure of Conceptual Thinking

It defines the nature of the conceptual approach of individuals. It allowed the development of methods to transform conceptual knowledge into systemic (dualistic) solutions.

#### 82) The Ontogenetic Structure of Strategic Intelligence

It defines the nature of the strategic style of individuals. It allowed forecasting of how individuals deal with conflicts and negotiations.

#### 83) The Ontogenetic Structure of Ethical Intelligence

It defines the nature of ethics. It allowed fostering its evolution, which drives individuals toward a higher level of functionality and use of their intelligence.

#### 84) The Ontogenetic Structure of Reflection

It defines the nature of reflection. It allowed the development of an action-reflection-action process that uses destructive and non-destructive pilot tests as input.

#### 85) The Ontogenetic Structure of Unicist Thinking

It defines the nature of adaptive behavior. It allowed developing the double dialectical approach to complex adaptive systems to produce results.

#### 86) The Ontogenetic Structure of Learning Processes

It defines the nature of learning. It allowed developing learning models and learning objects in the field of superior education to deal with the adaptive aspects of reality.

#### 87) The Ontogenetic Structure of Adults Learning Context

It defines the nature of any learning context. It allowed developing a system that begins with the context and ends with value generation.

#### 88) The Ontogenetic Structure of the Oedipus Complex

It defines the nature of evolution complexes. It allowed managing the driver of evolution inhibition using the necessary immune systems and defensive structures.

#### 89) The Ontogenetic Structure of the Individual Complexes

It defines the nature of inferiority and superiority complexes. It allows managing the driver of individual self-destruction to avoid its social consequences.

#### 90) The Ontogenetic Structure of Consciousness

It defines the nature of conscious behavior. It allowed defining the limits of individuals to add value to an environment by providing solutions.

#### 91) The Ontogenetic Structure of Languages

It defines the nature of a language. It allowed developing semiotic and semantic objects and a method to deal with the essences of communication and reasoning processes.

#### 92) The Ontogenetic Structure of Individual Archetypes

It defines the nature of an individual's archetype. It allowed forecasting individual evolution and empowering individual talents.

### The Functionalist Principles applied to Future Research

#### 93) The Unicist Logic to Infer the Future

It defines the nature of double dialectical inferences. It allowed the development of a method to use the structure found in the past and the information of the present to infer the future.

#### 94) The Ontogenetic Structure of Social Evolution

It defines the nature of social evolution. It allowed the development of the unicist theory of evolution that allowed defining the stage in which a culture is developing.

#### 95) The Ontogenetic Structure of Cultural Evolution and Involution

It defines the nature of cultural evolution. It allowed the development of adaptive approaches to foster cultural evolution based on fully reliable diagnoses.

#### 96) The Ontogenetic Structure of Social Mutation

It defines the nature of mutations. It allowed understanding mutations to mitigate their effects in cultures or install catalysts to accelerate them.

#### 97) The Ontogenetic Spiral of Human Evolution and Involution

It defines how the spiral of evolution and involution works. It allowed forecasting both the evolution and involution of human actions.

#### 98) The Ontogenetic Structure of Cultural Adaptiveness

It defines the nature of adaptiveness. It allowed understanding the level of adaptiveness of cultures to empower it and minimize over-adaptive behaviors.

#### 99) The Ontogenetic Structure of Cultural Stagnation

It defines the nature of stagnation. It allowed understanding the paradoxical behaviors of cultures that appear to be evolving while they are stagnated.

#### 100) The Ontogenetic Structure of Time Management

It defines the nature of time management. It allowed understanding people and cultures that are driven by the past, the present or the future and the natural consequences.

# Annex 2: Scientific Contributions to Science

## Contributions of the Unicist Functionalist Approach to Science

**In Scientific Research - 1980:** Development of a unicist ontological methodology for complex systems research, substituting the systemic approach to research adaptive systems. **2014:** The integration of the unified field of macro and micro behavior. **2015:** Development of the destructive and non-destructive tests to research adaptive environments. **2021:** Discovery of the universal functional structure of things.

In Life Sciences - 1988: Discovery of the functional structure that regulates evolution and the unicist ontological structure of living beings as a unified field. 2006: Discovery of the unicist ontological algorithm of evolution and involution. 2008: Discovery of the two types of integration, complementation, and supplementation, of elements in complex adaptive systems. 2012: Discovery of the unicist ontology of biological entities. 2013: Confirmation of the unicist ontology of viruses. 2014: Discovery of the ontological structure of chronic diseases. 2014: Discovery of the structure of therapeutics. 2015: Discovery of the ontological structure of health. 2016: Development of the Scientific Foundations of Medicine. 2021: Discovery of the unicist ontology of the DNA.

In Complexity Sciences - 1998: Development of the unicist ontology emulating the ontogenetic intelligence of nature. 2003: Discovery of the anti-concepts that work as antimatter. 2006: Development of objects to manage human adaptive systems emulating the structure of nature. 2011: Discovery of the unicist ontology of complex adaptive systems. 2014: Discovery of the behavior of objects in complex adaptive systems. 2015: Discovery of the essential opposition but operational complementation between the active function and the energy conservation function of concepts. 2017: Discovery of the unicist ontology that integrates the wide and restricted contexts. 2017: Discovery of the origin of root causes in adaptive environments.

In Information Sciences - 2002: Development of unicist ontogenetic based ontologies replacing the empirically structured ontologies. 2014: Development of unicist adaptive robotics. 2015: Development of prototypers. 2016: Discovery of the nature of the conceptual design. 2018: Discovery of the ontogenetic map to emulate the unified field of adaptive environments. 2018: Development of the unicist cognitive systems. 2019: Development of XD-Expert Systems. 2021: Development of business cobots.

**In Future Research and Strategy - 1984:** Modeling of the ontological structures that allow inferring the evolution developing the ontogenetic maps of human

adaptive systems. **2014**: Confirmation of the functionality of ethical intelligence in future research. **2015**: Discovery of the unicist ontology of personal strategies. **2016**: Discovery of the nature of entrepreneurial strategies. **2017**: Discovery of the double dialectical tactics. **2019**: Discovery of business catalysts. **2022**: Discovery of the structure of risk management.

In Logic - 1986: Development and formalization of the integrative and the unicist logic. 2013: Functionality of Dualistic Logic in complex environments. 2013: Discovery of the structure of aprioristic fallacies.

In Anthropology - 1986: Discovery of the "invariables" of human behavior. 1997: Discovery of the double dialectical behavior. 2008: Discovery of the anthropological lifestyles. 2010: Discovery of the institutional and social viruses. 2012: Discovery of the integration of ontogeny and phylogeny. 2012: Discovery of the stagnant survivors' role in societies. 2012: Discovery of the unicist ontological structure of aptitudes, attitudes, and intentions. 2013: Development of the unicist ontology of cultural adaptiveness & over-adaptiveness. 2014: Synthesis of Conceptual Anthropology. 2014: Discovery of the Cultural, Institutional, Individual and Social Archetypes. 2015: Discovery of the functionality of rationalism and subjectivism as social and individual addictions. 2016: Discovery of the nature of innovation processes. 2017: Discovery of the context of social dysfunctional utopias. 2019: Discovery of social catalysts. 2022: Discovery of the structure of individual purposes.

In Economic Science - 1989: Discovery of the unicist ontological structure of Economics. 1998: Discovery of the unicist ontological algorithm of the price elasticity of demand. 2004: Discovery of the ontogenetic structure of economic models and their functionality. 2011: Discovery of the ontology of currency and inflation. 2012: Discovery of the ontology of the industrialization level. 2012: Discovery of the unicist ontology of the overcoming of scarcity. 2012: Pricing of Futures and Options. 2012: Discovery of the unicist ontology of speculative manipulation. 2014: Synthesis of Conceptual Economy. 2015: Discovery of the unicist ontology of economic freedom.

**In Political Science - 1990:** Development of the ontological algorithm and the ontogenesis and phylogeny of ideologies and their functionality. **2013:** Development of the unicist ontology of Social, Economic and Political Democracy.

In Social Sciences - 1993: Discovery of the collective unconscious and the unicist archetypes of cultures. 2012: Discovery of the role of stagnant survivor elites in the stagnation of segments or cultures. 2016: Discovery of the nature of social networks. 2020: Discovery of the unicist ontology of evolutionary constructivism. 2020: Discovery of the nature of counter cycle building.

In Linguistics - 2004: Discovery of the unicist ontological algorithms of natural, ambiguous, and figurative languages and the unicist ontology of words. 2014: Development of semantic objects. 2015: Discovery of the ontological structure of subliminal communication. 2020: Discovery of the unicist ontology of the evolution of languages.

In Mathematics - 1996: Development of the conceptual basis of interdependent, dependent and independent variables. 2014: Development of the mathematical foundations of reality indicators.

**In Philosophy - 1994:** Development of the unicist ontology integrating philosophy, science, and action in a unified field. **1997:** Refutation of Hegel's and Marx's dialectics and the formulation of the laws of double dialectics.

**In History - 2000:** Development of a historical analysis methodology based on the unicist double dialectics.

In Cognitive Science - 2001: Development of a methodology to construct knowledge with existing information through an integrative logic. 2002: Development of the unicist reflection methodology to deal with the nature of reality. 2006: Discovery of the object-driven organization of mental processes and the development of cognitive objects. 2008: Development of the ontological algorithms of fundamental analysis. 2013: Development of the unicist ontology of erudition and wisdom (observers vs. participants). 2014: Discovery of the structure of the emulation of reality. 2015: Discovery of the unicist ontology of conceptualization. 2018: Discovery of the triadic functionality of conscious intelligence. 2018: Development of the Unicist Artificial Intelligence. 2020: Discovery of the Unicist Ontology of Functional Knowledge. 2021: Development of the unicist theory of functionality. 2022: Discovery of the structure of decision rules.

**In Education - 1979:** Discovery of the ontogenetic algorithms of learning which has given scientific sustainability, amongst others, to Piaget. **2014:** Discovery and development of learning objects. **2015:** Development of Reflection Driven Education. **2016:** Discovery of the nature of learning by teaching.

In Psychology - 1984: Discovery of human ontointelligence to deal with adaptive systems. 2003: Discovery of the unicist ontological structure of fallacies, the functionality of anti-intelligence and anti-intuition. 2004: Discovery of the double dialectical thinking process. 2005: Discovery of the unicist ontology and evolution laws of human essential complexes. 2011: Discovery of the ontology of conscious behavior. 2012: Discovery of the ontology of complementation of thinking processes. 2012: Discovery of the unicist ontology of psychopathy. 2014:

Discovery of the structure of subliminal decision-making. **2014:** Synthesis of Conceptual Psychology. **2015:** Functionality of concepts as behavioral objects. **2016:** Discovery of the nature of human metamorphosis. **2016:** Discovery of the functionality of thinking processes. **2017:** Discovery of the context of personal dysfunctional utopias. **2017:** Discovery of the nature of self-criticism. **2021:** Discovery of the functionality of neurosis. **2022:** Discovery of personal potential energy.

**In Semiology - 2012:** Discovery of the unicist ontology of semiosis as a complex adaptive system. **2015:** Development of semiotic role objects. **2017:** Development of semiotic research groups. **2022:** Discovery of the semiosis of music.

#### The Unicist Research Institute

Since 1976, The Unicist Research Institute has been the world-leading research organization that introduced the functionalist approach to science to research and develop the functionalist principles of the real world. <a href="www.unicist.org">www.unicist.org</a>